

What is claimed is:

1. A purge solenoid valve assembly having a valve driven by a solenoid, the assembly comprising:
 - a coil which, when energized, drives the valve; and
 - a cap;

5 wherein the cap is overmolded and the coil is encapsulated in the cap.
2. The assembly according to claim 1, further comprising:
 - a calibration feature encapsulated in the cap.
3. The assembly according to claim 1, further comprising:
 - an electrical connector, the connector molded as a portion of the cap.
4. The assembly according to claim 1, wherein the assembly is adapted to be coupled by snapping into a discrete lower body.
5. The assembly according to claim 1, wherein the assembly is adapted to be coupled by snapping into an intake manifold.
6. A purge solenoid valve assembly having a valve driven by a solenoid, the assembly comprising:
 - a bobbin;
 - a wire wound around the bobbin;
 - 5 at least one terminal electrically connected to the wire; and
 - an overmolded cap generally encapsulating the bobbin and the wire, the overmolded cap including a connector body formation partially encapsulating the at least one terminal.

7. The assembly according to claim 6, further comprising:

a pin displaceable with respect to the bobbin when an electric current flows through the wire; and

5 a pin displacement calibration feature including a resilient element biasing the pin with respect to the overmolded cap and a first locator adjusting the position of the resilient element with respect to the overmolded cap.

8. The assembly according to claim 7, wherein the pin displacement calibration feature further includes a second locator connecting the resilient element with respect to the pin.

9. The assembly according to claim 7, wherein the resilient element includes a coil spring.

10. The assembly according to claim 7, wherein the first locator threadably engages the overmolded cap.

11. The assembly according to claim 6, wherein the overmolded cap further includes a locking feature adapted for releasable retaining an electrical connector with respect to the connection body formation.

12. The assembly according to claim 6, wherein the overmolded cap further includes a snap fastening feature adapted for securing the overmolded cap to a mount.

13. The assembly according to claim 12, wherein the snap fastening feature is adapted for enabling the connection body formation to be reoriented with respect to the mount.

14. The assembly according to claim 7, further comprising:

at least one bearing unit guiding displacement of the pin with respect to the cap;

5 <61> a stator at least partially encapsulated by the overmolded cap and magnetically connected to a magnetic field created by the electric current flowing through the wire; and an armature portion of the pin responsive to the magnetic field.

15. The assembly according to claim 14, wherein the resilient element includes a coil spring, the pin displacement calibration feature further includes a second locator connecting the coil spring with respect to the pin, and the first locator threadably engages the overmolded cap.

16. The assembly according to claim 15, wherein the overmolded cap further includes a locking feature adapted for releasable retaining an electrical connector with respect to the connection body formation, and also further includes a snap fastening feature that enables the connection body formation to be reoriented with respect to a mount having a valve seat that engages the pin to control fluid flow.

17. A method of assembling a linear solenoid purge valve component, the method comprising:

5 winding a wire around a bobbin;
electrically connecting the wire to a terminal; and
overmolding a cap that generally encapsulates the wire and bobbin, and that partially encapsulates the terminal.

18. The method according to claim 17, further comprising:
providing a resilient element biasing a first locating member with respect to the cap;
engaging a second locating member with respect to the cap; and
adjusting the second locating member with respect to the cap to vary the biasing force
5 between the first locating member and the cap.

19. The method according to claim 17, further comprising:
providing a pin adapted for reciprocal movement with respect to the bobbin;
providing at least one bearing between the pin and the cap; and
connecting the cap with a mount, the mount having a valve seat adapted for engaging
5 the pin to control fluid flow.

20. The method according to claim 19, further comprising:
adjusting the cap to reorient a connector body formation of the cap with respect to the
mount.